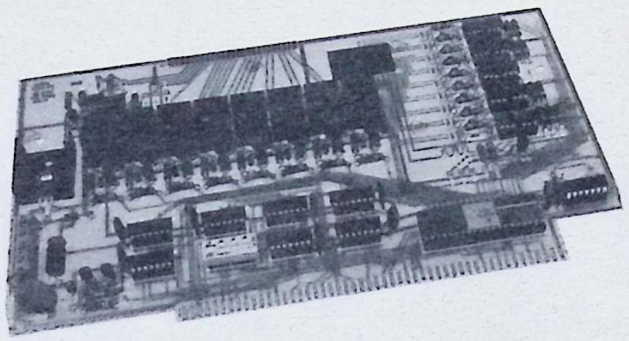
Technical Information

Altair™ 680b-Process Control Interface (680b-PCI)

Introduce your Altair 680b to the diverse world of electrical, mechanical and sensory devices with the addition of the 680b-Process Control Interface. By relaying various types of sensory information to the computer, the 680b-PCI permits a wide range of control applications.



Applications

Whether your applications revolve around industrial, scientific, business, communication or household uses, the potential of the 680b-PCI is virtually unlimited.

Some possible industrial applications include a product sorting and grading system. The 680b-PCI can be interfaced with various kinds of sensors for measuring size, weight, optical density and other properties while controlling a sorting mechanism.

In the field of scientific research, a 680b-PCI may be used to control environmental test conditions and gather test responses.

Suggested household uses include: control of thermostat settings, manual switches, lighting, lawn sprinkling and other home operations.

Features

The board consists of an eight relay output section, with each relay capable of switching 120VAC at 1 amp. Eight opto-isolators which can be configured by the user to accept a wide range of voltages make up the input section. Four more opto-isolated signal lines are arranged as two pairs of handshake lines, with the input section and output section each having one handshake pair. These lines are for control of and communication with external devices. All of the lines are completely isolated and balanced for use in environments with high levels of electrical noise.

Operation

When the board is set up and initialized, relay control is accomplished by outputting an eight bit word to the relay control channel. Logic "1" lines will energize their respective relays, and those set to "0" will de-energize. An input from the opto-isolator input channel reads the data from the opto-isolated input lines. The interrupt structure and use of the handshake lines are under software control.

Specifications

+ 9V unreg. @ 100ma when all relays off
+ 9V unreg. @ 400ma when all relays energized

*Opto-Isolators
Isolation: Resistance input to output: 200G ohms
Voltage: 1500V min.
Input active current: 10-100ma
Propagation delay: Varies with diode current from input to data (D) line
Diode and Transistor: Turn on: 60 μsec., typical
Turn off: 10 μsec., typical

*Relay Outputs
Isolation: Contact to contact—750VAC at 250M ohms
Contact to coil frame: 2000 VAC
Propagation delay: Pull in: 3.5 msec.
Release: 4 msec.
Bounce: 1.2 msec.

*Handshake Lines
Input: Same as Opto-Isolators
Output: Off leakage current @ 25°C: 10^{9} amps
On current: approximately 30ma

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